DOCUMENT RESUME

ED 224 367 HE 015 630

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TITLE Attrition and Retention.
SPONS AGENCY Department of Education, Washington, DC.
PUB DATE 30 Oct 80
NOTE 17p.; This paper was identified by a joint project of the Institute on Desegregation at North Carolina Central University and the ERIC Clearinghouse on Higher Education at The George Washington University.
PUB TYPE Reports - Research/Technical (143)

EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS Academic Persistence; *Black Students; College Desegregation; *College Freshmen; Comparative Analysis; Dropout Attitudes; Enrollment Influences; Ethnic Groups; Females; Higher Education; Institutional Research; Longitudinal Studies; Males; Minority Groups; *Sex; *Student Attrition; Student Characteristics; *White Students
IDENTIFIERS *University of Tennessee Martin

ABSTRACT

Trends in beginning freshmen attrition were studied at the University of Tennessee, Martin, for the fall quarters of 1977, 1978, and 1979. One part of the attrition study used the American College Testing (ACT) program's withdrawing/nonreturning student survey, while a second approach was based on the computerized People Oriented Information System for Education, which maintains the student database files. The compositions of the three freshmen classes were cross-tabulated by sex and ethnic category. The male/female composition of the classes reversed for 1978 and 1979 as compared to 1977, but the ethnic makeup was basically unchanged. Approximately 37 percent of the fall quarter first-time college freshmen did not return the following fall, and about 50 percent remained after 2 years. On the ACT survey, nonreturning students indicated major and minor reasons for leaving college, and almost 32 percent of the respondents cited one of the following three reasons as the single most important: desired major not offered, marital status changed education plans, or wanted to move to a new location. Based on the comparison of the student databases, no significant differences in attrition were found between males and females or between blacks and whites for the 1977 class. For the 1978 class, male attrition was statistically higher than the female rate (41.9 percent and 32.3 percent, respectively). The total student attrition rate between fall 1977 and 1978 did not change significantly, but the fall 1979 attrition rate was significantly lower for black students than for white. (SW)

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HE015630

October 30, 1980

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Abstract

Because of resource restrictions and a decreasing population of 18-21 year old persons, colleges and universities are vitally interested in retaining students who might not persist. A study was initiated to determine trends in attrition. The beginning freshmen for the fall quarter of 1977, 1978, and 1979 were selected for analysis. Initially, results were cross-tabulated by sex and ethnic group. A simple algorithm and associated computer program are presented.

Overall, the results appear to be consistent for each of the freshmen classes -- 37% of the beginning classes do not return the following year, and approximately 50% remain after two years. There appear to be no significant differences in retentions across ethnic groups. Some differences in retention of males and females were discovered.

Investigation is continuing. This investigation will focus on factors which contribute to persistence and non-persistence within the subject populations.

The activity which is the subject of this report was supported in whole or in part by the U. S. Office of Education, Department of Health, Education, and Welfare. However, the opinions expressed herein do not necessarily reflect the position or policy of the U. S. Office of Education, and no official endorsement by the U. S. Office of Education should be inferred.

ATTRITION AND RETENTION

Introduction

Studies have shown definite similarities in national attrition patterns, which have remained relatively unchanged for approximately the last sixty years (Summerskill and Darling 1955; Pantages and Creedon, 1978). Out of every 10 first-time college students, four will graduate from their original college within four years and 6 will leave, three during or at the end of the first year, two during or at the end of the second year, and one sometime after the second year. Of these six who leave, one will return and finish at the original college, one will not ever return to college, four will enroll at some other college where two will eventually graduate and two will become double dropouts (quit two or more colleges) (Iffert, 1957; Eckland 1964). Attrition rates are slightly higher for public, state-supported institutions (Trent and Ruyle, 1965). This relatively unchanging trend appears to indicate that we have not made the best possible use of the data as it was developed.

Most studies have focused on accertaining some common characteristics for non-persisters. The purpose of such focus was a means of identifying the potential dropouts early in their academic careers. Allegedly, early identification would allow universities to focus on, assist, advise, and retain students who would otherwise dropout. This focus could prevent misuse of resources by not using "broad brush" retention tactics. However, since little change has been made in retention rates, universities have either not made much concentrated effort at retention or the methods used have not been successful.

During the decade of the 1980's, the retention of enrolled students will probably receive more emphasis from universities than during the 1970s. This emphasis will be precipitated because of tighter restrictions on resources and a decrease in the traditional college freshman pool, 18-21 year olds (Shulman, 1976; Henderson, 1977).

Since enrollment is projected to decline during the 1980s (Parker, 1977; Selter, 1972) retention of students who do enroll will receive greater interest and emphasis. Early identification of those students most likely to leave will enable university officials to direct more attention (counseling and advising) to these students in an attempt to influence them to remain in school. A properly focused, successfully implemented retention program could sharply reduce the expected mid-1980s enrollment decline.

This university is vitally interested in the attrition/retention problem for several reasons:

1. we are located in rural northwest Tennessee without a large, nearby metropolitan area to recruit from,

2. the population of 18-21 year old persons is expected to decrease significantly by the mid and latter 1980s,

3. population is on the decrease in primarily agricultural areas,

4. resources available to the university will become more restricted, because a decrease in state support levels will cause a rise in student fees and cause some students to dropout, and

5. the inflation rate has increased the cost of education to the point where many potential students no longer believe they can afford to invest the needed resources (time and money) in an education, thus decreasing enrollments.

Method

Because of the interest in student retention, an attrition/retention study was initiated in spring 1980 at the university. The primary purposes of this study were to:

1. obtain statistics on the attrition trends at the university,
2. determine if persisting or non-persisting students exhibited any readily ascertainable common characteristics that might help in early identification,
3. determine why past students had decided not to return to school, and
4. obtain descriptive statistics on non-returners from previous years.

The study was divided into two parts--one part done completely by the university and the second part utilizing the American College Testing (ACT) program's withdrawing/non-returning student survey.

The ACT Educational/Survey Service survey was sent to 711 students enrolled in fall 1978 who did not return for fall 1979, who had earned 25 or more quarter hours and had not graduated during the period. Thirty-two were returned as "undeliverable as addressed". Of the 679 surveys delivered, 204 usable responses were received. These responses, which represented a 30% return rate, were then analyzed.

The portion of the study conducted entirely by the university utilized a PDP-11/70 computer using RSTS/E V7.0, and the student database files maintained by the information system of POISE (People Oriented Information System for Education). The programming language used for all programs was BASIC-PLUS. The first-time college freshmen for the fall quarters of 1977, 1978, and 1979 were selected for analysis. This selection was made so that any

trends or characteristics identified from the student files would be more current and have more relevance for decisions to be made.

The selected freshmen files were electronically compared with the total enrollment database for succeeding years/quarters to determine which students were still enrolled and which were not. Specifically, comparisons were made in the following manner:

1. database for fall quarter 1977 freshmen was compared with the fall quarter 1978, fall quarter 1979, winter quarter 1980, and spring quarter 1980 databases,

2. fall 1978 freshmen were compared with fall 1979, winter 1980, and spring 1980 total enrollments, and

3. fall 1979 was compared with winter 1980 and spring 1980.

Results

The class composition, cross tabulated by sex and ethnic category, of the three beginning freshmen classes is shown in Table 1. The male/female composition of the classes reversed itself for 1978 and 1979 as compared to 1977, but the ethnic make-up remained statistically similar.

From the electronic comparisons of the student databases, printouts were prepared which listed the numbers of persisters and non-persisters -- cross tabulated by major, sex and ethnic category. Preliminary analysis of the data indicated that approximately 37% of the fall quarter first time college freshmen did not return the following fall (37.4% for fall 1978 freshmen and 37.2% for fall 1977 freshmen). In numbers, this means that 363 of the 975 fall 1977 beginning freshmen and 358 of the 958 fall 1978 freshmen did not return for the second year. Also, 505 (51.8%) of the fall

1977 freshmen class did not return in fall 1979 to begin their third year. Student persistence rate and numbers for the fall 1977 and 1978 beginning freshmen are shown in graphs 1 and 2, respectively.

The ACT survey asked non-returning students to indicate major and minor reasons for leaving college. Minor reasons cited were:

Wanted a break from my college studies	23.5%
Academic advising was inadequate	22.1%
Inadequate study habits	18.6%
Experienced class scheduling problems	17.2%
Dissatisfied with my grades	16.7%

When students indicated an item was a major reason for leaving school, they were asked to indicate if it was also the single most important reason. The most frequent responses were:

Reason	Major	Most Important
Decided to attend a different college	30.4%	9.2%
Accept a full-time job	16.7%	4.9%
Wanted to move (or was transfered) to a new location	16.2%	7.0
Desired major was not offered	15.2%	14.8%
Conflicts between demands of job and college	13.2%	6.3%
Marital status changed my education plans	12.3%	9.9%

Almost 32% of the ACT survey respondents who indicated a single most important reason cited three reasons that cannot reasonably and realistically be acted upon by a small university -- desired major not offered, marital status changed education plans, or wanted to move (transferred) to a new location.

Although universities control the curriculum, and can add or drop courses and majors, certain majors requiring special equipment and/or highly trained faculty cannot realistically be added.

Of those twenty-one who left because we did not offer their desired major, ten were taking pre-professional curricula leading to a degree in the health field, seven were majoring in engineering, and one was seeking a degree in religion and theology. None of these final degrees are offered here. The three remaining students indicated a field whose degrees are offered, but without a specified major or area of concentration, no determination can be made concerning the applicability of their choice of reasons for leaving.

Marriage changed the educational plans of two freshmen (one male, one female), seven sophomores (two males, five females) and five juniors (one male, four females).

Analysis of the data produced by comparing the student databases yielded the following results:

1. for fall 1977 and fall 1978, the total student attrition rate after one year does not change significantly,

2. no statistically singificant difference occurs between males and females or blacks and whites for the entire trace period for the fall 1977 beginning freshmen class,

3. the fall 78 beginning freshman class, where male/female enrollment reversed itself from fall 1977, showed that the male attrition rate was statistically higher than the female rate, 41.9% for males and 32.3% for females ($p < .05$), and

4. the fall 79 analysis indicated that the attrition rate for black students was statistically lower than for white students, 10.9% for blacks and 19.5% for whites, ($p < .05$).

Conclusions and Future Investigation Suggestions

Information obtained from the ACT survey and the electronic comparisons done at the university require some further analysis prior to drawing specific "concrete" conclusions. It is highly improbable that a single autopsy report (checking those who are no longer with us) combined with the data collected here will yield absolutely perfect results. However, trends, patterns, areas of concern, and general directions of future investigation can be discerned.

Because of technical problems with the 1977 and 1978 databases, which have been corrected for the 1979 database, it was impossible to track students through the full years. Consequently, much potentially useful information was not gathered, but is being collected for fall 1979 beginning students and students in each succeeding quarter/year. Such information includes:

1. number of students who stop out for one quarter or more and still return the following fall,
2. the quarter during, or after, which the greatest number of students leave,
3. the schools with the highest "contribution" to the attrition, and
4. interdepartmental transfers -- numbers, timing, frequency, and losing/gaining department.

In addition to the areas stated in the preceeding paragraph, other areas of future investigation were revealed through the ACT survey, because of student comments or low ratings on the survey. These include:

1. personal counseling services
2. financial aid
3. course availability/scheduling

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TABLE 1

CLASS COMPOSITION-FIRST TIME FRESHMEN
BY SEX AND ETHNIC CATEGORY

Fall 1977

	Black	Caucasian	Other*	Total
**Male	76(46.7%)	415(55.9%)	19(73.1%)	510(52.3%)
**Female	131(62.3%)	327(44.1%)	7(26.9%)	465(47.7%)
Total	207(21.2%)	742(76.1%)	26(2.7%)	975(100.%)

Fall 1978

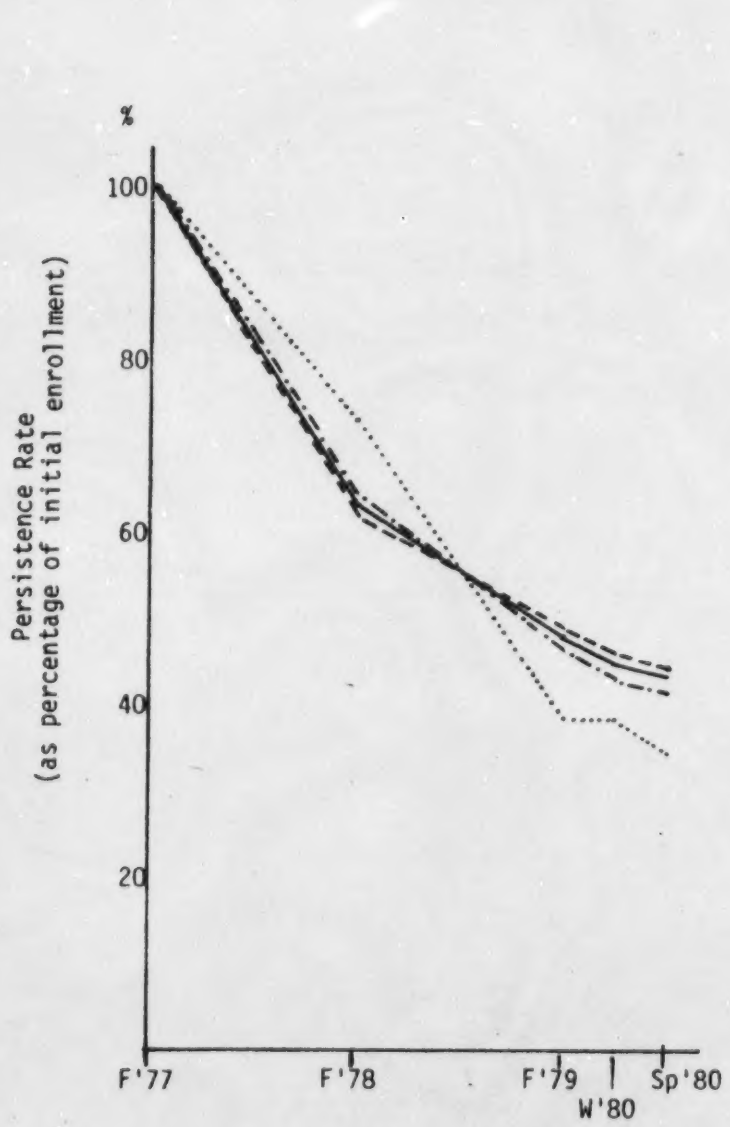
	Black	Caucasian	Other*	Total
**Male	71(35.9%)	360(49.6%)	25(73.5%)	456(47.6%)
**Female	127(64.1%)	366(50.4%)	9(26.5%)	502(52.4%)
Total	198(20.7%)	726(75.8%)	34(3.5%)	958(100%)

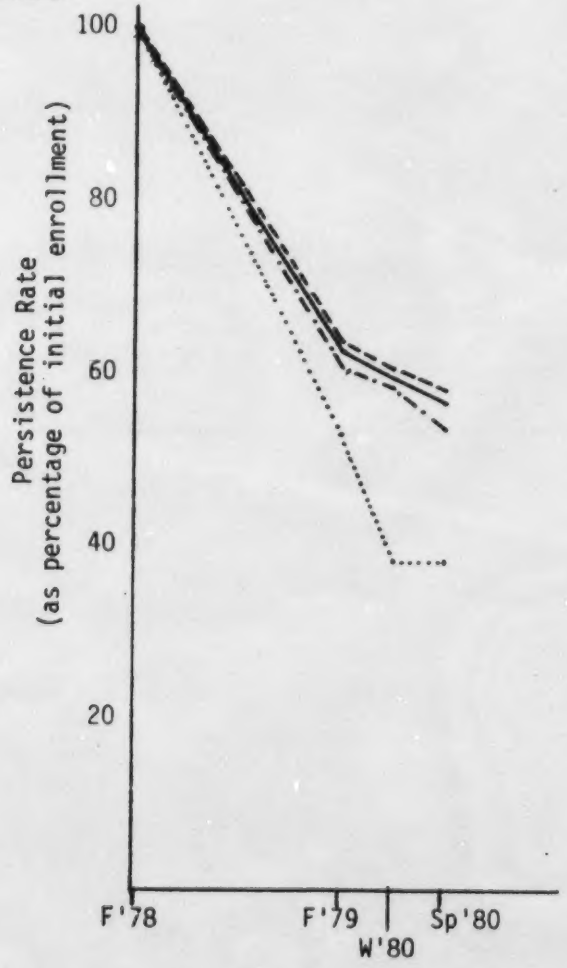
Fall 1979

	Black	Caucasian	Other*	Total
**Male	75(32.6%)	457(50.7%)	22(73.3%)	554(47.7%)
**Female	155(67.4%)	444(49.3%)	8(26.7%)	607(52.3%)
Total	230(19.8%)	901(77.6%)	30(2.6%)	1161(100%)

*Other = Spanish, Oriental and Foreign Students
**Percentages shown on this line are the male/female percentages of that ethnic category.

Persistence Rate for Fall 1977 and 1978 Beginning Freshmen





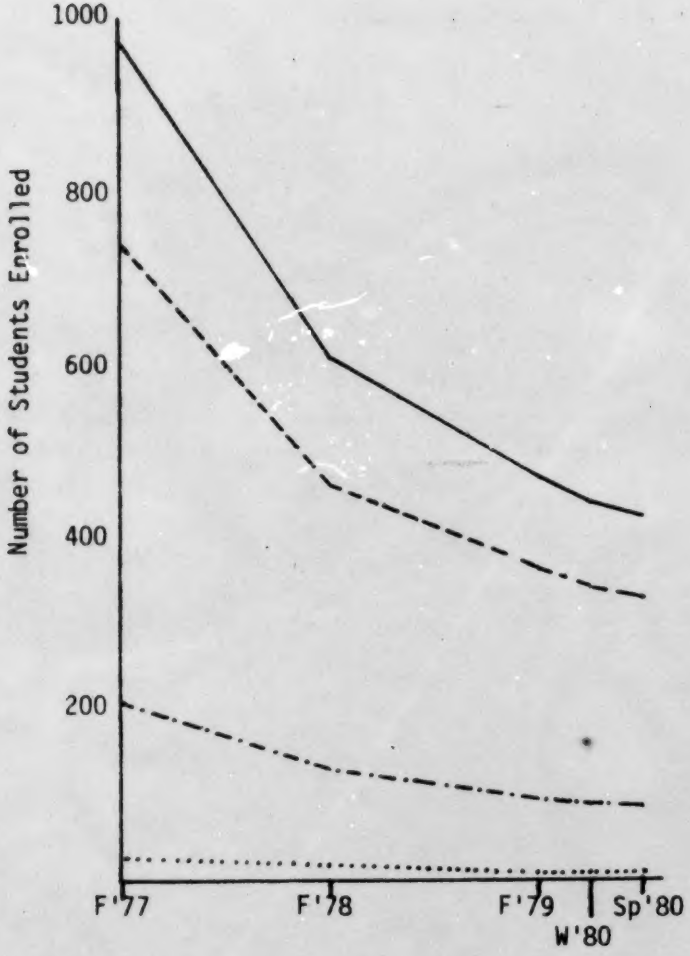
Numbers of Students Persisting from Fall 1977 and 1978 Beginning Freshmen

_ _ _ _ _Caucasian

_._._._._Black

.....Other (Spanish, Oriental, Foreign)

_____Total



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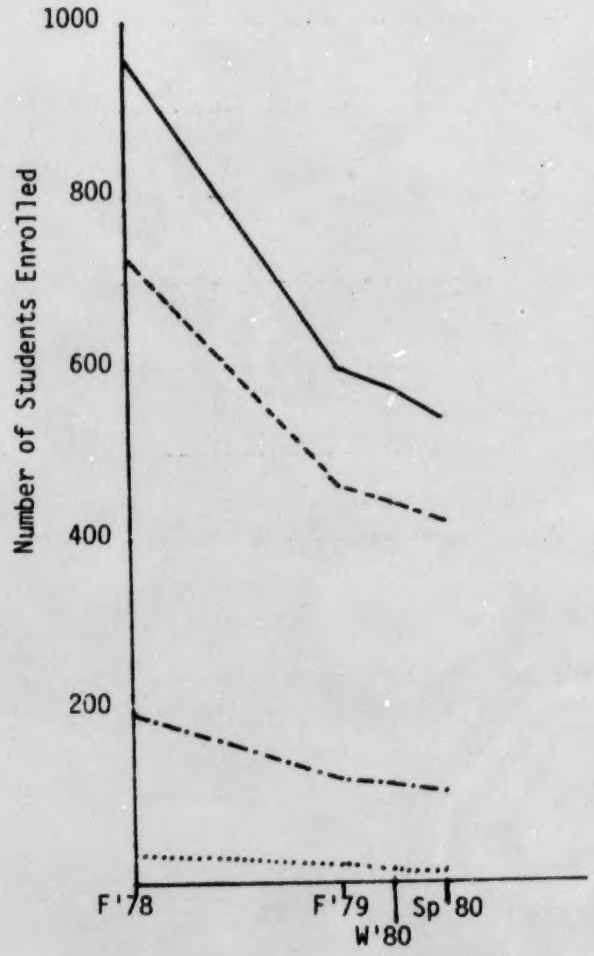

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